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Southwestern MEDICINE

OFFICIAL JOURNAL OF THE SOUTHWESTERN MEDICAL ASSOCIATION, THE TEXAS ORTHOPAEDIC ASSOCIATION, THE SOUTHWEST OBSTETRICAL AND GYNECOLOGICAL SOCIETY, THE SOUTHWESTERN DERMATOLOGICAL SOCIETY, TEXAS DISTRICT ONE MEDICAL ASSOCIATION, THE SOUTHWESTERN NEW MEXICO MEDICAL SOCIETY, AND EL PASO COUNTY MEDICAL SOCIETY

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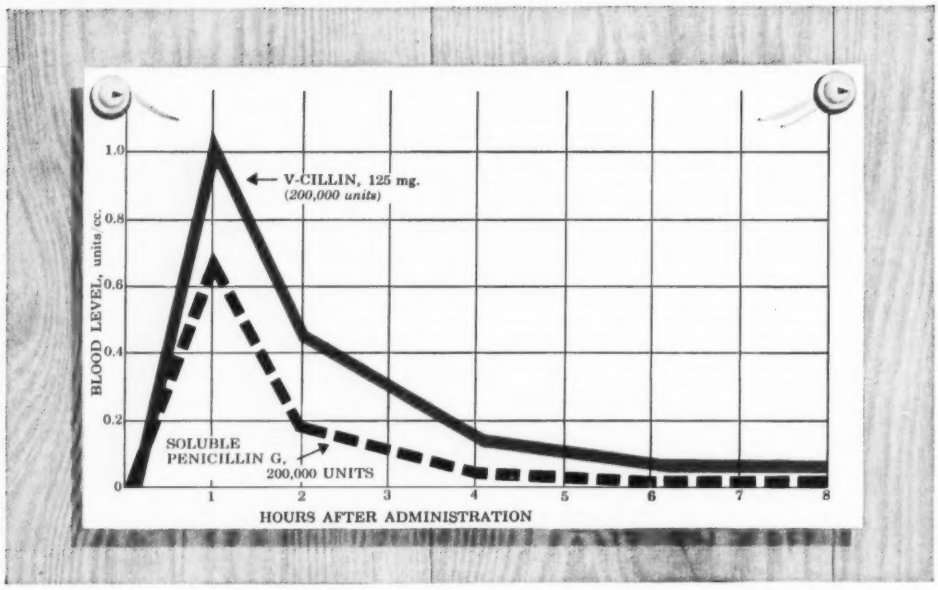

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Southwestern MEDICINE

VOL. XXXVII JUNE, 1956 No. 6

CURRENT THERAPY

Diagnosis of Pheochromocytoma

By Jack A. Bernard, M. D., El Paso

Elsewhere in this issue there is a report of a pheochromocytoma.

The exact incidence of these tumors is unknown but the incidence has been found to be around 0.5 per cent in hypertensives subjected to sympathectomy. This means that out of every 200 hypertensives whom we see in our daily practice, statistically there is one case of pheochromocytoma. Undoubtedly therefore we have all had unrecognized cases in our practice.

Numerous tests for pheochromocytoma have been introduced since Roth and Kvale first introduced the histamine test in 1945, yet few routine tests are done except in the larger medical centers. More routine screening tests should be carried out in our offices, if we are to diagnose these tumors. These tests should be simple and without alarming side effects so that the busy physician can perform them easily without fear of harmful reactions.

Repeat Tests

Therefore it is our intent to repeat the simplest tests, and emphasize their use as an office procedure in the hope that more physicians will set up these procedures and routinely test their hypertensives and the other patients indicated in order to screen out some possible cases for further study and confirmation.

First it is important to recognize that there are two types of cases: one type with a normal blood pressure except during a paroxysm associated with the typical clinical symptoms characteristic of the syndrome; the second type in which patients have persistent hypertension indistinguishable from essential or malignant hypertension.

In children with reported cases of pheochromocytoma, sustained hypertension is much more common. The classical paroxysmal picture is rare.

Histamine Tests

For those patients with normal blood pressure and hystory of paroxysmal hypertensive attacks, the histamine test of Roth and Kvale is simple and has produced no serious side effects, (except rarely a severe hypertensive response in a patient with pheochromocytoma). The test is carried out as follows: A basal blood pressure is obtained and histamine is then injected rapidly intravenously in dosage of 0.025 to 0.050 mg. of histamine base in 0.5 cc. saline solution. A rise in arterial pressure approximately 100 mm. of Hg in excess of the elevation produced by the cold pressor test constitutes a positive response.

The cold pressor test (should be performed first as a control) is performed after a rest period of at least 15 minutes and a basal blood pressure is obtained. The hand is immersed in ice water for 1 minute and blood pressure readings are taken at ½ to 1 minute intervals from the onset. Barbiturates and other sedatives should be withdrawn before the test as they have an inhibitory action on the cold pressor test.

Regitine Recommended

For patients with sustained hypertension the use of Regitine as a routine office procedure is recommended and urged. The procedure is attended by remarkably few side effects. After a base line blood pressure has been obtained, 5 mg. Regitine in 1 cc. of solution is given intravenously and blood pressure readings are made every thirty seconds for three minutes and then every minute for seven minutes or longer. A positive Regitine test consists of a drop in blood pressure that exceeds 35 mm. of mercury systolic and 25 diastolic.

False negative Regitine tests have not been reported but false positive results may occur in: 1. Patients who are heavily sedated or anesthetized, 2. In patients with hypertension and uremia, and 3. In patients whose blood pressure is in the low hypertensive range (from 140 to 170 mm. systolic and 90 to 110 diastolic). For the latter patients; that is, for patients with BP lower than 170/110, it is preferable to use the provocative test of histamine. Regitine will depress the blood pressure of patients with essential and renal hypertension, but usually less than 35 mm. of mercury systolic and 25 diastolic.

Some False Responses

It is therefore evident that Regitine will give some false positive responses, but this does not deter its usage as a screening test. All positive cases can be

(Continued on page 349)

A Case of Hypertension Due to Pheochromocytoma

By H. M. Gibson, Jr., M. D., and C. P. C. Logsdon, M. D., El Paso

Hypertension is a very common symptom of disease, one manifestation of pathology that we all see, whether we do general practice or a specialty; but we are often prone to forget that it is only a symptom and not a complete diagnosis.

It is true that we have to classify a very large number of cases as essential hypertension even after a complete and minute examination; however, the number that we can attribute to definite and sometimes correctible causes is constantly increasing. It, therefore, behooves us to redouble our efforts to determine the precise cause of all cases of hypertension that we may see.

To name hyperthyroidism, anxiety states, nephritis, congenital circulatory defects, polycystic kidneys, and adrenal medullary tumors as causes of hypertension, is to call only a very small number of the disorders that may produce excessive blood pressure elevations.

This paper deals with a case of the last named variety — a functioning tumor of the medullary portion of the adrenal gland, called a pheochromocytoma. This tumor is an uncommon variety, true, but the results of a proper diagnosis are generally so spectacular that once a case has been seen, it imprints itself forever on one's memory.

Many Symptoms

The symptoms of this condition are many and varied but one thing is constantly present — hypertension. The elevated blood pressure may be constant or intermittent, but it is always there. The other symptoms cover an enormous range, but all can be duplicated by injecting large amounts of epinephrine or norepinephrine into the normal human.

The most common signs produced are tachycardia, severe perspiration, trembling and headache. Some less common tokens are abdominal pain, precardial distress and shortness of breath, blurred vision and vomiting.

The physical findings are usually indefinite. Rarely a mass can be felt. Sometimes making pressure over a certain area will precipitate an attack, but the patient appears ill and genuinely sick. As mentioned, tachycardia is usually present and a severe drenching perspiration is very often noted.

The routine type laboratory work of urinalysis and CBC shows us nothing. The B. M. R. is elevated in elevated blood sugar. Specific laboratory tests must 50 per cent of the cases [1]. About one-half also have be performed when the disease is suspected. These fall into three groups.

Histamine Injections

First is the stimulation of the secretion of epinephrine, i. e. Adrenergic. This is done by injecting histamine according to the method of Roth and Kvale [2]. If excess amounts of tissue are present in the body capable of manufacturing epinephrine or nor-epinephrine, then the patient's blood pressure will rise markedly in response. This test should be used only in periods of normotension.

The second and most practical test is using the group of substances that will neutralize excessive adrenalin, i. e. adrenolytic. Many chemicals are used, but we believe Regitine is the most reliable and safest for office work. If a patient's blood pressure is elevated and it is due to the presence of unnatural amounts of adrenalin, injection of this substance results in a prompt and profound drop in blood pressure. Certain conditions will sometimes cause a false positive reaction to a single test.

Third Group

The third group of special tests involves testing the urine for excretion of catecholamines (nor-epinephrine and epinephrine). It is reputed that this test is the most accurate of all, being elevated in all phases of the blood pressure cycle. The method is complicated but is available in more and more laboratories [3].

Because the medulla of the adrenal gland and the sympathetic chains have a common embryological origin, these tumors may arise not only in the adrenals but anywhere sympathetic nerve tissue is found. The great majority occur in the adrenals themselves. Thus, precise localization becomes a problem. Roentenography aids us considerably. Retroperitoneal air insuflation is our most valuable aid, done by the method of Reese and Maclean [4]. We frequently combine this with I. V. P.'s or retrogrades to further assist in pinpointing the lesion.

Summary of Diagnosis

In summary of the diagnosis, the essential element is suspicion. No one test may be considered diagnostic. They must all be added together, and the total results considered in making the diagnosis.

The treatment is surgical. Because of the ease with which both adrenals and the entire lumbar sympathetic chain can be explored through it, the transperitoneal approach is, in my opinion, far superior to any other single incision or combination of cuts.

The problems of anesthesia should be mentioned. Extremely able assistance was given in this case by Dr. J. Walker of El Paso. When the tumor is first approached even minor handling produces increases in blood pressure. This is handled by titrating Regitine intravenously to control it. As soon as the blood supply of the tumor is isolated and clamped, then the

problem becomes one of extreme hypotension. This is combated by Levophed preferably; although sometimes adrenalin itself is necessary. This must be maintained for a period varying from a few hours to several days until the opposite adrenal gland begins to function again.

Case History

The patient was 44 year old white male who was a farmer.

C. C. "High blood pressure."

P. I. The onset had been almost fifteen years ago when the patient first started having "spells". A typical spell consisted of first noticing a "fainty feeling" followed by shortness of breath and palpitation. These attacks were almost always followed by a drenching sweat.

At first the attacks came every few months, but have gradually increased in both frequency and severity. At the time of admission the attacks were occurring every 5 to 7 days and lasting for several days at a time. At various times the blood pressure had been found elevated during the seizures, but it was always normal in between. At one time the systolic pressure had been caught at 270, and it usually was in excess of 230. Past history and family history were non-contributory.

P. E. The patient was a thin male of 45 who appeared to be chronically ill and exhausted but not emaciated.

B. P. 140/70 Pulse 80

Examination was negative except that the right kidney could be palpated. Pressure on this area did not bring on an attack.

C. B. C. showed a mild leucocytosis but was otherwise negative. The urine was negative.

I. V. P.'s in conjunction with retroperitoneal air insuflation revealed the right kidney displaced downward by a large mass above it. The left kidney was normal.

Several I.V. injections of Regitine resulted in blood pressure drops of 100 to 120 points in the systolic pressure. I. M. injection produced the same results.

On September 30, 1956, the tumor was approached transperitoneally and removed. Immediately the blood pressure dropped to unobtainable levels. Levophed in conjunction with I. V. fluids kept the pressure up to between 90 and 100 systolic. This was no longer necessary after 12 hours. The blood pressure stabilized itself at about 100 systolic.

The remainder of the post operative course was uneventful.

Pathological examination disclosed a typical pheochromocytoma.

The patient was last heard of in January, 1956, and was gaining weight. The systolic blood pressure continued to run between 110 and 120 systolic.

The essence of this article is that every hypertensive case should include in its work-up (1) an I. V. P. and (2) a Regitine test. If either are suspicious for a pheochromocytoma, then the urinary catecholamines should be determined.

References

1 McDowell, F. W.: J. Internatl Surgeons, 19:365-72, March 1953

2 Roth and Kvale: A. M. J. Med. Sci., 210:653, 1945

3 Goldenberg, Marcel et al: A. M. J. Med., 16:310-327, March 1954

4 Reese and Maclean: Canada M. A. J., 67:632-637, December, 1952

Diagnosis of . . . . .

(Continued from page 347)

studied further by other tests, as no one drug is infallible. Repeated tests, perhaps a battery of tests, may be necessary to establish the diagnosis.

For confirming a positive Regitine test the Benodaine test may be carried out, but only in the hospital, as it may produce considerable side reactions. Basal blood pressures are taken while a slow intravenous drip of isotonic saline is maintained and then Benodaine is injected over a period of two minutes, 0.25 mg. per kilogram of body weight, and blood pressure readings are taken every minute for 10 or 15 minutes or longer. For the average adult the required amount will therefore be between 15 and 20 mg. In the presence of a pheochromocytoma, a fall in BP usually occurs within 5 minutes, and averages 50 mm. mercury systolic, lasting approximately 30 minutes.

Smaller Dosage

It would seem wise to use smaller than the calculated dosage of Benodaine in critical patients as Benodaine may produce serious side reactions such as cardiac or cerebral episodes. It may also cause apprehension, flushing, palpitations, substernal pressure and dyspnea. Severe pressor reactions may occur and amyl nitrite pearls should be available for the rapid severe blood pressure rise that may occur.

Finally a battery of tests may be necessary to confirm the diagnosis: such as Mecholyl, Etamon, Dibenamine. But it is our purpose to emphasize and encourage the routine use of the office procedures: Histamine for the paroxysmal cases, and Regitine for the sustained hypertensives, until the determinations of the urinary secretion of the catecholamines, the reaction products of epinephrine and nor-epinephrine, or some other chemical diagnostic procedure becomes more generally available.

APHORISMS and MEMORABILIA

Miscellaneous Truths and Concepts

By Andrew M. Babey, M. D., Las Cruces, N. M.

1. "When the bacteriological and serological studies have yielded negative results, when appropriate therapeutic tests have been negative, when biopsies of the bone marrow and accessible lymph nodes fail to give a clue, and when x-ray studies of the lungs and bones disclose nothing of significance, the cause of the fever is usually tuberculosis, Hodgkin's disease or lymphosarcoma, one of the collagen diseases, or a hidden neoplasm." A. Mc Gehee Harvey, and James Bordley III; *Differential Diagnosis;* W. B. Saunders Company; 1955; p. 301

2. "Vertigo is often used in this strict sense—to denote that the sensation of movement is one of rotation. But there is nothing to be gained by adhering to this definition, for we know that other equally distressing forms of giddiness, of identical aetiology and significance, may be characterized not by a revolving sensation but by a sense of falling through space, or by some movement of self or surroundings in any other plane. For example, the patient may describe how the ground rocks beneath him or appears to rush up towards him. He may see walls or objects tilting this way or that; the ceiling may look as if it is falling in or the pavement as if it were swaying." John D. Spillane; *British Med Jour.;* Sept. 3, 1955; p. 612

Meniere's Disease

3. "In Meniere's disease the use of vasodilator drugs such as histamine and nicotinic acid and the search for focal sepsis or allergens all have their advocates, but in my experience are not rewarding." Spillane; *loc. cit.;* p. 614

4. "A sure sign of intellectual vigour in a teaching hospital is regular meetings variously organized as clinicopathological conferences or as "grand rounds." By these meetings—the exact label does not matter—the visitor can soon gauge the intellectual climate of the community. If he finds the attendance good; the discussion natural and easy, with the most junior free to speak and assured of a patient hearing; the dubious or unsupported assertion, whoever makes it, promptly, firmly, and courteously criticized; and the quality of exposition and deduction scientifically sound—then he can be sure that the climate is healthy." S. Melville Arnott; *The Lancet;* Oct. 15, 1955; p. 785

5. "Formerly, what I call "the chief complex" predominated. Teaching hospitals tended to be divided into separate firms and departments, the headship of which was achieved automatically by the passage of years. (Surely it is a biological absurdity to assume that ability, any more than somatic growth, continues through life?) The system demanded that the chief should receive respect amounting almost to servility from his juniors. His word was law and it was unheard of for a junior to engage him in debate." Arnott; *loc. cit.;* p. 785

"No" Men

6. "Those of us who wish to preserve our faculties in some sort of useful working order surround ourselves with "no"-men, to ensure that our standards shall not sag with our waist-lines." Arnott; *loc. cit.;* p. 785

7. "Terramycin, gentian violet and piperazine citrate are the drugs of choice at the present time. The pinworm is a parasite too tough to kill. Terramycin simply deforms the eggs so that a certain percentage lose their viability. We do not know quite how piperazine citrate acts. Gentian violet appears to have some effect on the adult worm as well as on the eggs. What we aim to do is to establish a cycle of biologic attrition in which more of the parasites die off than are acquired over a particular period of time. That seems to be the best that can be done." B. H. Kean; *American Journal of Medicine;* Oct. 1955; p. 626

8. "In order properly to evaluate a therapeutic agent in the treatment of pinworm it is necessary to ascertain first what can be accomplished by stopping the child from scratching at night. If this measure were successful the cure rate for pinworm would approximate 100 per cent. The adult female of the pinworm lives only eight weeks; hence if reinfection can be prevented the disease will be cured in eight weeks." Kean; *loc. cit.;* p. 626

Clean Pajamas

9. "The ideal course in pinworm therapy would be to wash and iron the pajamas daily. They do not need to be sterilized—washing and ironing are sufficient." Kean; *loc. cit.;* p. 627

10. One hygienic measure which I consider absolutely crucial is the shower in the morning, not at night, because it is in the morning that you wash away the eggs which are deposited during the night." Kean; *loc. cit.* p. 627

11. "There is considerable demand for enemas in the treatment of pinworm. The mother thinks that something is really being done when a pinworm or two is washed out. The fact is that enemas have never proved successful in curing pinworm no matter what has been put in the solution." Kean; *loc. cit.;* p. 627

Hypopituitarism

12. "The most important and most conclusive investigation is simply to look at the vulva. In hypopituitarism severe enough to produce coma there is no hair on the mons and only a few short hairs on the labia majora. If the patient has no pubic hair, confirmation of the diagnosis of hypopituitarism can be obtained from two sources. Firstly, the thyroid is too small to palpate; a palpable gland almost negatives the diagnosis. Secondly, there is atrophy of the genital tract. The vulva and vagina are atrophic, the cervix is very small and may be little more than a dimple, and the uterus is correspondingly small; these findings are very significant if the patient is under 45, though they are obviously of much less importance in a woman of 60." H. S. Sheehan; *British Med. Jour.;* Oct. 22, 1955; p. 1022

13. "For the benefit of those who may only have studied the rather misleading accounts of hypopituitarism which were current in medical textbooks a few years ago, three points must be made clear. Firstly, the patient's nutrition is usually quite satisfactory. A significant degree of emaciation throws serious doubts on the diagnosis of hypopituitarism, though it does not necessarily disprove it. Secondly, though no woman looks her best when she is in coma, these patients do not show premature senility. Thirdly, the state of the teeth is quite irrelevant." Sheehan; *loc. cit.;* p. 1022

14. "Within a couple of hours after giving a large dose of intravenous glucose to a patient with hypopituitary coma the blood sugar may fall again to levels of 30 mg. or less. It is therefore important that, when the glucose has been begun, it should be continued for many hours, and that a careful watch on the blood sugar should be maintained afterwards." Sheehan; *loc. cit.;* p. 1023

15. "The patient is suffering not only from a total insufficiency of the anterior pituitary, but also from an extremely severe insufficiency of the adrenal cortex and of the thyroid. There is thus a very strong theoretical argument for giving adrenocortical and thyroid hormones. In practice, however, these treatments are disappointing. Cortisone, "eucortone," deoxy-cortone and salt, and testosterone have usually been given. Some of the patients have recovered gradually in the course of a day or two; others have died. There is no convincing evidence that these treatments changed the course of the coma from what it would have been if no treatment had been given. On the other hand, there is no evidence that cortisone is harmful in these cases, and thus there is no particular reason for withholding it if the doctor believes that it may do good." Sheehan; *loc. cit.;* p. 1023

Thyroid Dose

16. "It is stated in many textbooks that the administration of thyroid is very apt to produce coma in patients with hypopituitarism. There is no real evidence to support this idea, and in fact a dose of 2 gr. (0.13g.) of thyroid daily is usually quite harmless." Sheehan; *loc. cit.;* p. 1024

17. "It is well known that about five per cent of patients with classical acute nephritis have minimal abnormal urinary findings. Abnormal urinary constituents are, however, a crude index of disturbed renal function, and their absence should not lead to the assumption that the kidneys are healthy. The conspicuous retention of water and salt in such cases shows that renal function is altered." E. P. Sharpey-Schafer; *The Lancet;* Oct. 22, 1925; p. 841

18. "Cardiology, once a bedside art, is becoming an exercise in techniques—electronics, sound recording, cardiac catheterization, and angiograpy. It is a paradise for those who like gadgets and making things work." D. A. Longlea; *The Lancet;* Nov. 19, 1955; p. 1085

19. "Coeliac disease today remains one of a dwindling group of ailments that have to be recognized on purely clinical grounds, for there is no laboratory test to give the diagnosis the stamp of certainty." Wilfrid Sheldon; *loc. cit.;* Nov. 26, 1955; p. 1097

(To be continued)

Three Medical Meetings Scheduled in Mexico

Three medical meetings in Mexico have been announced and physicians from the United States, as well as Mexico, are invited to attend.

The International Congress of Radiologists will be held in Mexico City July 22-28. Physicians desiring information may write to Dr. Jose Noriega Limon, Oro 15, Mexico City 7, D. F.

The sixth National Reunion of Gynecologists and Obstetricians will be held Oct. 9-13 at Leon, Guanajuato, Mexico. Gynecologists and obstetricians from throughout Mexico will participate in this convention. Further information may be obtained from Dr. Jorge Gonzales Alba, Edificio Fabricas de Francia, Leon, Gto., Mexico.

The twelfth annual convention of Medicos de Provincia will be held in Durango Nov. 25-27. Presenting the scientific program will be physicians from all north Mexico. Handling arrangements is Dr. F. Perez Carranco, Independencia 202 Sur, Durango, Mex.

The national Pediatricians Convention for Mexico was held in University City in Mexico City May 1-5.

Dr. C. Albores Culebro,
Esq. Hgo. y Rodriguez,
Torreon, Coahuila.

MEETINGS

Dr. Hinchey of San Antonio Heads Texas Orthopaedic Association

Dr. John J. Hinchey of San Antonio was elected President of the Texas Orthopaedic Association at its annual meeting held in Galveston on April 23rd in connection with annual sessions of the Texas Medical Association.

Dr. Lawrence Griffin of Austin was elected Vice President and Dr. Margaret Watkins of Dallas was re-elected Secretary-Treasurer, Dr. Paul C. Williams of Dallas is the retiring President.

A total of 110 physicians attended the one-day meeting which was held in Crow's Restaurant for the morning and noon sessions and in Randall Hall at the University of Texas Medical Branch at Galveston for the afternoon session.

Speakers and their subjects were: Dr. Rex Howard, Fort Worth, "Athletic Injuries of the Knee Joint"; Dr. Richard W. Leong, Houston, "Skeletal Changes Noted in a Series of Sickle-Cell Anemia Cases"; Dr. Louis W. Breck, El Paso, "The Post-Polio Calcaneo-Valgus Foot"; Dr. Bruce M. Cameron, Houston, "Leg Shortening Technique" (motion picture); Dr. Rex L. Diveley, Associate Professor in Orthopaedic Surgery at the University of Kansas School of Medicine, "The Painful Hip"; Dr. Paul C. Williams, Dallas, "Pitfalls in Spinal Surgery"; Dr. T. Wiley Hodges, Dallas, "Surgery of the Hip Joint"; Dr. Marvin P. Knight, Dallas, "Tissue Reaction to Metal Fixation: A Report on Three Cases"; Dr. R. A. Murray, Temple, "Reconstruction of the Thumb" (with motion picture); Dr. B. F. Boylston, Houston and Dr. Robert Milam, Houston, "Segmental Fractures of the Tibia"; Dr. Janet Travell, New York, Associate Professor of Clinical Pharmacology at Cornell University Medical College, "The Management of Pain Due to Skeletal Muscle Spasm".

Dr. John J. Hinchey

Official Publication

The Association elected at its business meeting to designate SOUTHWESTERN MEDICINE as its official publication. One of the oldest orthopaedic organizations west of the Mississippi River, the Texas Orthopaedic Association had its beginnings thirty years ago and was re-organized as a former organization with a new constitution and by-laws in 1934.

Membership in the Texas Orthopaedic Association is limited to men who have passed both sections of the American Board of Orthopaedic Surgery. At present there are 133 members of the Texas Orthopaedic Association in good standing.

The organization meets each year in conjunction with the Texas Medical Association and is devoted to the advancement of orthopaedic surgery in the State of Texas. It meets for one day and has a program consisting of formal papers and case presentations. The case presentations are rendered by the doctors in the local host city for the particular year. Annual meetings are of considerable value and an excellent program is put on each year. Dr. G. W. N. Eggers of Galveston, Professor of Orthopaedic Surgery at the University of Texas Medical Branch at Galveston, was program chairman for the Galveston meeting.

Baylor Graduate

The new president, Dr. Hinchey, received his B. A. in 1935 and his B. S. in 1936 from Texas Technological College. He was graduated from the Baylor University School of Medicine in 1940 and took a Fellowship in Orthopaedics at the Mayo Clinic, Rochester, Minnesota. He received his M. S. in orthopaedic surgery in 1946 from the University of Minnesota.

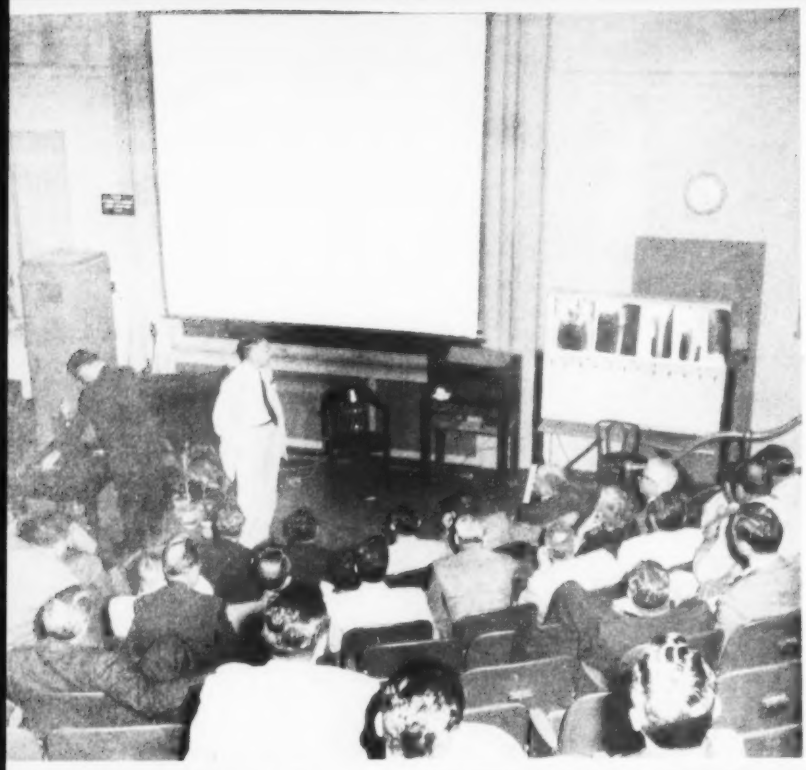
(Continued on page 373)

Photo Report on the

TEXAS ORTHOPAEDIC ASSOCIATION MEETING

Galveston, Texas, April 23

Held in conjunction with the 89th Annual Session of The Texas Medical Association



Members of the Texas Orthopaedic Associati
(left) met in the afternoon of their one-d
meeting at Randall Hall in the University of Tex
Medical Branch at Galveston, following a morni
session in the Pelican Room of Crow's Restaura
and a luncheon and business meeting in t
Flamingo Room in Crow's Restaurant. In the pho
below are Dr. Rex L. Dively, principal speake
who is Associate Professor of Orthopaedic Surge
at the University of Kansas School of Medicine
Kansas City, and the wives of two associati
members Mrs. David M. Cameron, El Paso, (right
and Mrs. Bruce M. Cameron, Houston. The Dr
Cameron are brothers. Below on the right is D
G. W. N. Eggers, Professor of Orthopaedic Su
gery at the University of Texas Medical Branch
Galveston, who was program chairman for th
meeting, and Dr. D. R. Swetland, Marlin, Texa
At bottom of the page are, left to right, Dr. D
C. McKeever, Houston, Dr. Paul R. Harrington
Houston, Dr. R. O. Whitson, Baytown, and D
Richard Eppright, Houston.

Above left are Dr. Paul C. Williams, Dallas, (right) retiring President of the Texas Orthopaedic Association, and Dr. David M. Cameron, El Paso. Above right are Dr. Margaret Watkins, Dallas, who was re-elected secretary-treasurer of the Texas Orthopaedic Association, and Dr. E. M. Cowart, Houston, president of the Association in 1949. Below left are Dr. Edward T. Smith, Houston, (left) and Dr. G. B. Stephenson, Beaumont. Below right are Dr. M. P. Knight, Dallas, (left) and Dr. Rex J. Howard, Fort Worth. Drs. Knight and Howard were speakers at the meeting.

Below left are (left to right) Dr. Henry C. McDonald, Fort Worth, Dr. L. L. Lankford, Dallas and Dr. M. V. Atchison, Harlingen. Below right are Dr. T. Wiley Hodges, Dallas, (left), one of the speakers, and Dr. Dorsey K. Barnes, Dallas.

1. Dr. Bruce M. Cameron, Houston, one of the speakers, (left) and Dr. Arthur L. Glassman, Houston. 2. Left to right are John W. G. Powell and his wife, Dr. Janet Travell, Associate Professor in the Department of Clinical Pharmacology at Cornell University Medical College and one of the meeting's speakers, Dr. Johanna Blumel, who is with the Department of Orthopaedic Research at the University of Texas Medical Branch at Galveston, and Dr. Robert B. Elliott, Houston. 3. Dr. D. C. Hucherson (left) and Dr. B. F. Claussen, both of Houston. 4. Dr. George W. Horton, Odessa, (left) and Dr. W. H. Ainsworth, Galveston. 5. Dr. Ben L. Schoolfield, Dallas, (left to right) Dr. William M. Branch, Dallas, and Dr. Edward T. Driscoll, Midland. 6. Mrs. T. A. Klecka, San Antonio, wife of one of the members, (left) and Mrs. Estelle Greenwalt, secretary to Dr. G. W. N. Eggers. 7 Dr. P. M. Girard, Dallas, (left) and Dr. Clarence R. Martin, Houston. 8. Dr. D. J. Henry, Dallas, (left) and Dr. Ruth Jackson, Dallas. 9. Left to right are Dr. T. M. Anderson, Dallas, Dr. B. D. Burdeaux, Houston, and Dr. Kairyu Hasegawa, Houston.

74th ANNUAL MEETING OF THE

NEW MEXICO MEDICAL SOCIETY

In Roswell, New Mexico, May 2-4

Dr. Stuart W. Adler, of Albuquerque, N. M., (below) was elected President of the New Mexico Medical Society at its 74th annual meeting in Roswell, N. M., May 2-4. Other new officers are Dr. S. R. Ziegler, Espanola, N. M., President-Elect; Dr. James Sedgwick, Las Cruces, Vice-President; and Dr. Lewis Overton, Albuquerque, Secretary-Treasurer. Santa Fe was selected as the site for next year's convention.

Born in South Bend, Indiana, Dr. Adler received his Ph. B. from Lafayette College in Easton, Pa., and his M. D. from Harvard University School of Medicine. He interned and served his residence in Boston City Hospital and then did a tour of duty in Pediatrics at the Mayo Clinic. He practiced in Minnesota and Illinois before moving to New Mexico in 1933 to practice medicine in his specialty, Pediatrics.

Dr. Adler is a member of the American Academy of Pediatrics, a Fellow in the American Public Health Association, is certified by the American Board of Pediatrics, and is a past president of the Bernalillo County Medical Society. He is at present Medical Director and for 15 years has been active in the work of the Crippled Children's Service Program of the Department of Public Welfare in New Mexico. He is serving his third term on the board of the New Mexico State Hospital at Las Vegas.

Having recovered from chest surgery for cancer in March, 1955, Dr. Adler preaches the gospel of two X-rays of the chest a year for men over 40, "so others will be as fortunate as I was by sheer accident".

Standing before the coyote of the Roswell Senior High School, at the welcoming sign of the convention, are (left) Dr. Emmet M. Jennings, Roswell, and Dr. C. Pardue Bunch, Artesia.

Left to right at the registration desk are Dr. A. J. Jenson, Hobbs, Mrs. W. N. Worthington, Roswell, Mrs. F. R. Brown, Roswell, chairman of the registration committee, and Mrs. Earl A. Latimer, Jr., Roswell.

1. Dr. and Mrs. Forrest H. Adams of Los Angeles and son Judd get a taste of Roswell sunshine beside the swimming pool at their motel. Dr. Adams, Associate Professor of Pediatrics at the University of California at the Los Angeles School of Medicine, was one of the guest speakers. 2. Dr. S. R. Ziegler, Espanola, (left) President-Elect, and Dr. A. E. Margulis, Santa Fe. 3. Dr. J. C. Sedgwick, Las Cruces, (right) Vice-President, and Jimmy Smith, Lubbock, A. H. Robins Co. representative. 4. Dr. Gerald A. Slusser, Artesia, (right) new member of the State Grievance Committee, and A. J. Stenseth, Albuquerque, Esco Bio-Chemicals Co.

5. Dr. Dana M. Street, (left) Chief of Orthopaedics at the Veterans Administration Hospital in Memphis and one of the speakers, and Captain Vernon E. Martens, Medical Corps of the U. S. Navy, Director of Laboratories and Chief Pathologist at the National Naval Medical Center at Bethesda, Maryland, who was also one of the speakers. 6. Dr. Ian Macdonald, Associate Professor of Surgery at the University of Southern California School of Medicine and one of the speakers, (right) and Dr. Quentin J. Florence, Roswell, Surgery Roundtable co-chairman. 7. Left to right are Dr. Steve Marshall, Roswell, Dr. John S. Moore, Roswell, Surgery Roundtable co-chairman, and Dr. Morris J. Fogelman, Associate Professor of Surgery at the Southwestern Medical School at Dallas and one of the speakers.

Scientific EXHIBITS

1. Beards were much in evidence at the meeting, in view of the fact that many of the physicians were from Albuquerque, which is celebrating its 250th anniversary July 4th-14th and which has some 2,000 citizens growing beards. Above Dr. Eugene Szerlip, Albuquerque, (left) and Dr. Jack Redman, Albuquerque, indulge in a little horseplay. 2. Dr. Orval I. Nesbit, Albuquerque, (left) and James C. Helke, Albuquerque, Pfizer Laboratories. 3. Left to right are Dr. W. N. Worthington, Roswell, Dr. E. W. Lander, Roswell, President of the Chaves County Medical Society, S. F. Hutson, El Paso, Southwestern Surgical Supply, and Dr. A. D. Maddox, Las Cruces. 4. Dr. D. D. Moore, Walker Air Force Base, W. E. Hamilton, Roswell, and E. W. Griffith, Oklahoma City, both of Eli Lilly & Co. 5. Left to right are Lyle Bartlett, Midland, Lederle Laboratories, Dr. Earl A. Latimer, Jr., Roswell, and Dr. I. J. Marshall, Roswell. 6. Left to right are H. B. Walton, Dallas, Eaton Laboratories, Tom McLaughlin, Albuquerque, also of Eaton, and Dr. F. R. Brown, Roswell. 7. Dr. Ralph H. Homan, El Paso, (left) and D. LeRoy Foster, Lubbock, Mead Johnson & Co. 8. Dr. J. A. Rivas, Belen, (left) and W. L. La Fortune, Albuquerque, Upjohn.

1. Left to right at the registration desk are Mrs. John J. Craven, Roswell, Mrs. H. O. Lehman, Portales, Mrs. Robert R. Boice, Roswell, and Mrs. E. M. Jennings, Roswell. 2. Bob Gregory, Albuquerque, Searle representative, and (left to right) Mrs. W. H. Peacock, Mrs. F. B. Nordstrom and Mrs. J. C. McCulloch, all of Farmington. 3. Dr. W. E. Badger, Hobbs, (left) and Dr. H. A. Fenner, Hobbs. 4. Dr. Donald H. Ewalt, El Paso, (right) and S. L. Owens, Parke, Davis & Company. 5. Dr. Manley B. Cohen, El Paso, (left) and A. E. Peterson, Ayerst Laboratories. 6. Dr. H. M. Gibson, El Paso, (right) and Jim Reed, Roswell, E. R. Squibb & Sons. 7. Dr. Louis L. Geary, Albuquerque, (right) and B. L. Spencer, Albuquerque, Ciba representative. 8. Dr. R. F. Crane, Portales, (left) and Pete Newquist, Albuquerque, Wyeth Laboratories. 9. Dr. Pierre Salmon, Roswell, (left) and Dr. Robert R. Boice, Roswell.

District One Physicians Active at Texas Medical Meeting

District One of the Texas Medical Association was represented at the annual state medical meeting in Galveston, April 21-25 by Dr. Charles E. Oswalt, Jr., councilor, Fort Stockton, and Dr. Russell Holt, El Paso, vice councilor. Representing El Paso County Medical Society were Dr. Russell L. Deter and Dr. Merle D. Thomas.

Scientific Papers

Scientific presentations were made by Dr. Louis W. Breck, El Paso, who spoke on "The Post-Polio Calcaneo-Valgus Foot"; Lt. Col. John P. Stapp, chief of the Aero Medical Field Laboratory at Holloman Air Development Center in New Mexico, who discussed "Air Force Crash Survival Research, Automotive and Aircraft"; Dr. W. W. Schuessler, El Paso, "Statistical Report on the Cleft Palate Problem"; Dr. Ralph S. Clayton, El Paso, who presented a paper on "Current Status of Treatment of Carcinoma of the Cervix", which was prepared by Drs. Mason, Boverie, Black and Clayton of El Paso.

Dr. Breck was named to the Council on Medical Defense for a five-year term and Dr. Thomas was elected a delegate to the American Society of Anesthesiologists in Kansas City this fall. Dr. Holt was elected second vice-president of the Texas Railway and Traumatic Surgical Association.

Provisional Membership

Provisional membership of 24 months and an indoctrination program on the state level were adopted by the Texas Medical Association House of Delegates after considerable discussion. A third proposal recommended by the Board of Councilors a year ago in efforts to strengthen county medical societies—compulsory attendance at society meetings—was rejected.

Encouragement of greater participation in affairs of the state organization came with enlargement of four standing committees, cancer, tuberculosis, mental health, and industrial health (this latter a newly formed standing committee), to ten members each and the opportunity of appointing up to nine members of reference committees instead of only seven as heretofore.

Similar Status

In addition to the new standing Committee on Industrial Health, similar status to permit continuity of effort was given to the Committee on National Emergency Medical Service, Committee for Liaison with Workmen's Compensation Insurance Companies, and Committee for Patient Care, which will replace the special Committee on Nursing Care and deal with other paramedical groups as well as nurses.

Preliminary approval to make standing committees of the Committees on School-Physician Relationships and on Rural Health and Doctor Distribution also was given. Further study to include preventive as well as punitive provisions was recommended before establishment of the Committee on Liaison with the State Bar as a standing committee.

Growing pains were reflected also in reports that current membership in the Texas Medical Association is 6,800 (including 53 Negroes who have joined since House action qualified them a year ago) with 7,700 anticipated before the end of the year and that membership in the Association probably will reach 16,300 by 1975.

Controversy Continues

Because of continued controversy over the merits of fluoridating public water supplies, approval of such measures was withheld and a decision reached to avoid further official consideration of this problem for the ensuing five years.

Completion of the doctor distribution survey in Texas was announced with the conclusion that there is no doctor shortage and even less maldistribution than many believed.

Individualism and free enterprise received resounding support in the adoption of resolutions (1) urging a comprehensive study of all aspects of social security (a statewide survey showed Texas doctors 10 to 1 against inclusion of physicians under social security), (2) opposing federal aid to medical education, (3) opposing additional state hospitals for cancer patients, (4) inquiring into policy on civil service employees' medical service, (5) encouraging use of Salk poliomyelitis vaccine through normal channels of distribution and administration, and (6) approval of the Bricker amendment.

Optician Licenses

Licensure of dispensing opticians was approved, but licensure of physical therapists and of nurse technicians trained in psychiatric nursing was disapproved.

An annual physical examination for each physician was recommended, and attention was called to the group disability insurance program sponsored by the Texas Medical Association which has been provided for all members as a hedge against accident or illness.

El Paso Hospital Administrator named to House of Delegates

Bill Burton, administrator of Southwestern General Hospital in El Paso, has been named an alternate to the House of Delegates of the American Hospital Association. Burton is one of two alternates from Texas named to the important policy-making group of the AHA.

MONTHLY CLINICAL PATHOLOGICAL CONFERENCE
EL PASO GENERAL HOSPITAL

April 19, 1956

Frederick P. Bornstein, M. D., Editor
Case No. A-584-55
Presentation of case by Dr. Saul B. Appel
History Presented by Dr. Nathan Kleban

A 65 year old married Latin-American shoe-shine man was admitted to this hospital for the second time because of chest pain.

Two hours before admission, while sitting in a chair, the patient suddenly experienced severe lower retro-sternal pain which persisted in intensity and did not radiate. The quality was not described. There was chilliness and sweating. Neither vomiting, cough, nor trauma preceded the onset of pain.

Cataract Operation

Twelve years before an operation had been performed in another hospital because of a cataract of the right eye. Two years later enucleation of the right eye was carried out in this hospital with a diagnosis of secondary glaucoma. Blood pressure was 140/88. Findings consistent with glaucoma were reported on examination of the right eye. The left pupil was miotic and fixed. There were no other unusual discoveries recorded. The Kahn test was negative; blood counts and urinalysis were within normal limits.

No History

Family and past history were non-contributory. There was no history of angina pectoris, known hypertension, or congestive heart failure.

Physical Examination

Temp. 98.6 Resp. 20 Pulse 108 P. P. 84/60

The patient complained of severe retro-sternal pain. He appeared to be in shock, was dyspneic, did not cough. State of nutrition was fair. The skin was cold and clammy. The right eye was absent. Corneal scarring and lenticular opacity were noted in the left eye. Distant breath sounds and crepitant rales were detected on auscultation of the lungs.

One examiner located the PMI in the 5th LICS in the MCL. Another described slight cardiomegaly. P2 was louder than A2. There were no murmurs, thrills, or arrhythmia. There was tenderness over both upper abdominal quadrants. Bowel sounds were normal. Liver, spleen, and kidneys were not felt. There was a one-plus pitting edema of the lower extremities.

Hospital Course

Meperidine 100 mg. was given in the emergency room, with some relief of the pain. He was given oxygen and levarterenol without reversal of the shock. A little more than an hour after arriving on the ward, the patient suddenly complained of left postero-lateral chest pain. Respirations ceased and heart sounds were inaudible. Intra-cardiac adrenalin and manual artificial respiration were of no avail.

Laboratory

Portable chest film: Pleural effusion of right hemithorax with slight shift of mediastinum to left.

Electrocardiogram: Diffuse S-T — T changes compatible with antero-inferior sub-endocardial ischemia.

X-ray Discussion
Dr. Charles C. McVaugh

We have a single portable A-P radiographic examination of the chest which reveals obliteration of the right chest, apparently due to fluid. This could be pleural effusion or fluid from some other source. The patient is slightly rotated in the film. However, there appears to be some displacement of the mediastinum to the left.

I get the impression that there is slight straightening of the left cardiac border. I cannot visualize the right cardiac border and cannot determine cardiac enlargement — the aortic shadow and cardiac border blend. With a massive pleural effusion, there may be some shift of the mediastinum.

There is apparently no atelectasis associated with this, inasmuch as there appears to be some shift of the mediastinum to the left with no elevation of the right hemidiaphragm.

Left Lung Clear

The left lung field appears to be clear, and so actually I believe we learn very little from this single examination of the patient except we have effusion or fluid in the right chest. Another cause of this could be hemorrhage.

We have a slight shift in the mediastinum, straightening of the left cardiac border, the significance of which I can't determine, as I can't visualize the entire cardiac shadow. There may be pericardial effusion associated with this; then, however, you would expect to see congestive failure in the left lung.

Dr. Saul B. Appel

This is a very short protocol. Dr. Bornstein excused this very brief case protocol by stating that very often the house staff, and certainly many of us, are

presented with a patient who is acutely ill and expires very quickly and who doesn't give you a chance to obtain all kinds of tests and the benefit of time to observe which way the wind is blowing.

The total duration of this illness, at least the acute phase of this illness, could not have been more than three to four hours; and therefore the house staff certainly didn't have much chance to make any refined diagnostic effort, and I think they should be commended for what they did obtain in this period of time.

Sitting In Chair

Now, this male is 65 and his illness apparently began while he was quietly sitting in a chair. I know he was quietly sitting in a chair because he was totally blind. He had been in Southwestern General Hospital 12 years ago, at which time his blood pressure was normal. He began to lose his eyesight at 47 and he was entirely blind in the left eye and was losing sight in the right eye, otherwise he had always been in good health. This man did not have hypertension —his blood pressure was 140/88 which was similar to the blood pressure recorded 12 years before, so we are presented with a patient with very little history, certainly nothing positive except blindness, and cataract with secondary glaucoma. I asked Dr. Britton what general diseases he would think about, if we just said here was a patient with a cataract.

Dr. Bloyce H. Britton

In this type of case, we cannot say it is aligned with any particular disease, other than we do know that diabetes, nephritis and certain other allied diseases produce change in the fluid which supplies the lens with nutrition.

Dr. Saul B. Appel

At any rate, the patient was clammy and cold, with a low blood pressure, relatively fast pulse, respiration 20, which may or may not have been the case, (so often we do not actually take the respiration of the patient, just put 20 if it looks normal) and temperature 98.6. On examination, there was a question whether the heart was slightly enlarged or not and the pulmonic second sounded louder than the aortic which is understandable with that low systemic blood pressure and small pulse pressure.

He was a little tender in both upper abdominal quadrants, but the bowel sounds were normal and no masses were felt. The one plus pitting edema of the lower extremities may or may not be significant.

Sedentary Patient

In one sense we can say that this patient was sedentary, since he was blind, so it is understandable that he should have stasis in the lower extremities. Both extremities were slightly edematous, which makes one eliminate the possibility of a unilateral phlebothrombosis.

On the other hand, with two static extremities, the chances of a phlebothrombosis are much greater, and as we all know, there are often no signs whatsoever in the lower extremities when a patient has phlebothrombosis and shoots a pulmonary embolism.

Substernal Pain

At any rate, he got a little relief from his pain which, as you remember, did not radiate. The pain was substernal in origin. He got oxygen, relieving the shock-like picture. The X-ray was made, revealing an effusion in the right chest and possible displacement of the heart and presumably the mediastinum to the left.

He suddenly complained of a left postero-lateral chest pain, and promptly expired. Intracardiac adrenalin and artificial respiration failed to arouse him. There is one other bit of evidence before I postulate what I think might be the cause. May I have the EKG, please?

No Tachycardia

There is no tachycardia as the rate is 90 here. The P-waves are not the type seen in pulmonary embolism, they are ordinary looking P-waves. The outstanding features are the S-T segment depression which you can see in Leads II and III. In Lead I the S-T was slightly lower. The S-T is elevated in AVR and slightly elevated in AVL and again depressed in AVF, also the V-4, V-5 and V-6.

These changes are not specific, they are very suggestive and in addition I might point out that there is a Q-wave in the left arm lead. It is not terribly deep but when associated with the S-T segment elevation and sharply inverted T-wave, it strongly suggests that there may be an area high up in the left lateral ventricular wall posteriorly of myocardial infarction.

Ischemic Process

Of course if we had had more time we would have made other records to see the sequence of changes, however, this cardiogram strongly suggests that there is an ischemic process in the region of the left lateral border and also inferiorly because it is present in AVF. so I would visualize it as lateral and posterior or inferior.

Whether or not this is truly a coronary picture only seen in this one lead we cannot be sure because sometimes you will see a picture like this in a patient with a vertical heart.

The most likely thing that I would think of would be coronary occlusion with myocardial infarction. There are some things here that would not occur in a routine coronary case, mainly the pleural effusion on the right, and the shift in the mediastinum apparently to the left, without a pneumothorax.

Other Findings

The other findings are quite typical — his sudden death and the failure of resuscitation. It is not unusual to see a patient die acutely with a severe coronary.

Pulmonary Embolus

The second thing one must think of is pulmonary embolus with or without infarction. A man of this age group who sits around most of the time is entitled to thrombosis and pulmonary embolism. However, here again, the finding of pleural effusion sticks out like a sore thumb. Of course he didn't spit up blood but of course within four hours one might not expect to see blood, and why would the heart suddenly shift over to the left?

I notice on the X-ray that the left hilar vessels and left lung did not appear to be very well vascularized and an embolus into the left pulmonary artery would shut off a significant amount of pulmonary blood flow and an embolus of that size would be enough to kill a man. However, how would we explain the effusion on the right, unless we assume that with acute cardiac failure he could suddenly develop this massive obscuration of the right chest, and that doesn't seem too likely.

Unlikely Disease

Now, intra-abdominal disease causing this picture also seems very unlikely. Of course, we are in this part of the country where conceivably an amoebic abscess could rupture through the diaphragm into the pericardium and produce a picture very much like this.

But then, how would we explain the severe left postero-lateral chest pain, unless of course such an incident precipitated in a 65 year old man coronary occlusion with death. However, the electrocardiogram does not suggest pericarditis at all. It is conceivable that you could see this non-specific picture — I do not like that diagnosis.

Next Question

The next question comes up, could he have had a dissecting aneurysm of the aorta? Well, he could have and it would explain a lot of these features, although there are several things against the dissecting aneurysm of the aorta; technically, one should say, dissection of the aorta with aneurysm, that makes more sense.

If he had a dissecting aneurysm it could have ruptured as it bulged down between the media and intima and adventitia; it could have bulged down and ruptured into the right hemithorax, producing this massive pleural effusion.

Combination

Also, it could have ruptured back into the pericardium and the combination of those two could have conceivably pushed the mediastinum over to the left, and as it was rupturing down and around, it would have caused an awful lot of pain and shock — shock not only from the pain, but also from the severe blood loss into the chest and mediastinum and with its compression of the heart.

One could visualize all sorts of abnormalities, specially if it dissected proximally back towards the base of the aorta and thereby narrowed the coronary ostia, producing a pattern of ischemia and then the final blow could have been rupture into the chest, giving him the left postero-lateral pain.

However, dissecting aneurysm is usually seen in patients with severe long-standing hypertension.

Age Group Right

The age group is right, but I think we have established that this man did not have hypertension of any degree. However, it could have occurred without hypertension; I am just saying that is one argument against it. Also, one usually thinks of a dissecting aneurysm as not producing much of a drop in blood pressure.

However, if this is a dissecting aneurysm with a sequence as I have outlined, then it is understandable that his blood pressure would have dropped.

One Reason

Now, one reason I think we should mention dissecting aneurysm again is because I am sure that many of them go unrecognized and are called coronaries and the patient is signed out as such because they aren't too frequent, at least not too frequently diagnosed, and apparently 90 per cent of them eventually end in sudden death, that is, within hours. Of the 10 per cent who survive, many die within the next few months to a year. So I think I will stick my neck out and vote for dissecting aneurysm with that sequence I have mentioned.

Dr. Joe C. Carter

With massive hydrothorax and without knowing whether it is blood or effusion occurring suddenly my explanation would be not a dissecting aneurysm, but a ruptured thoracic aneurysm. If there had been a pre-existing effusion for any length of time, I would suggest it was on the basis of pulmonary embolism.

Clinical Diagnosis: Coronary Thrombosis

Dr. Saul B. Appel's Diagnosis: Dissecting Aneurysm of the Aorta

Pathological Diagnosis: Arteriosclerotic Aneurysm of the Descending Aorta, Dissecting Type, with Rupture into Right Pleural Cavity

Pathological Discussion by Dr. Frederick P. Bornstein:

On autopsy we found a slender, elderly man. The external examination was not remarkable. As was

(Continued on page 373)

ORIGINAL ARTICLES

Clinical Differentiation of Primary and Secondary Thrombocytopenic Purpura

By Lee Ehrlich, M. D.,* Phoenix, and Steven O. Schwartz, M. D., Chicago

Thrombocytopenic purpura is usually and quite properly divided for clinical convenience into two groups: First, the primary or the essential group, and the secondary or the symptomatic variety. The former is the one most commonly encountered in clinical medicine and implies a primary disturbance of the spleen of unknown etiology.

In the secondary group, the splenomegaly is due to a well-defined cause, such as leukemia, Hodgkin's Disease, lymphosarcoma, Sarcoidosis, etc. The purpura in this secondary group, therefore, is thus only a symptomatic manifestation of another underlying disease causing thrombocytopenia by actual megakaryocytic destruction or by "hypersplenic" activity of a diseased spleen.

Role of Spleen

The role of the spleen as the sole incriminating factor in the pathogenesis of the disease has been postulated for these many years. The two foremost proponents of this viewpoint have been Dameshek[1] on one hand, and Doan and Wiseman[2] on the other. Both agree only in that the megakaryocytes are normal in number. Dameshek's concept is that the "spleen has an indirect or humoral action upon the bone marrow, either by preventing the growth or maturation. . . or else by blocking (platelet) delivery from the marrow."

The platelet production from these megakaryocytes is impaired and inadequate, this effect being mediated as a result of a hormone liberated within the spleen, thereupon promptly subsiding as a result of splenectomy. Doan and Wiseman, however, have produced evidence favoring a mechanical rather than the hormonal concept—that is, by way of selective sequestration and phagocytosis of the platelet within the spleen per se.

Emphasis Shifts

In the past four years, the emphasis has shifted from the spleen as the site of platelet destruction to that of the circulating plasma. It has been shown that when infusions of plasma from patients with thrombocytopenia are injected into normal recipients, a rapid and precipitous fall in platelet counts results and may persist for as long a period as two weeks.[3]

By the same token, normal platelets when transfused into thrombocytopenic patients disappear within a few hours. And this was true in some cases, regardless of whether splenectomy had or had not been performed. Recently, moreover, a series of experiments employing the Coombs anti-human globulin serum has revealed additional information involving this time, plasma auto-antibodies reportedly attached to red blood cells, similar to that seen in acquired hemolytic anemia.

Coexistence

It might be well to remember that the coexistence of thrombocytopenic purpura and acquired hemolytic anemia is not too infrequently seen. In addition, when one recalls the transient benefit of adrenocorticotrophic hormone or cortisone in the reduction of the bleeding tendency in thrombocytopenia, it is interesting to postulate that this may be the result of temporary "neutralization" of these aforementioned antibodies. So much for the pathogenesis of this disease.

Despite the seemingly decreased role of the spleen experimentally, the presence or absence of splenomegaly in thrombocytopenic purpura remains a point of disagreement in the literature. It is this point and its clinical and the prognostic ramifications of the existence of splenomegaly that I wish to emphasize.

Disagreement Exists

That disagreement does exist is only too clear. Wintrobe[4], for example, states that in idiopathic thrombocytopenic purpura, "the spleen is palpable in only about a third of the cases . . . (but) never extends more than one to two finger breadths below the costal margin." According to Fowler[5], "the spleen may be enlarged but this is not constant."

Minot[6] notes that "the spleen may be moderately enlarged particularly in the chronic type but abnormally small spleens are also reported." Kracke[7] states that "the spleen is not enlarged" and Doan and Wiseman[2] that "the spleen is never more than slightly increased in size and any case in which the spleen is easily palpated almost surely belongs to the symptomatic group." Castle's[8] opinion is that "rarely, the spleen is slightly enlarged." And so on.

136 Cases

With this in mind, 136 cases of thrombocytopenic purpura have been reviewed from the files of the Cook County Hospital in Chicago, and from the hospitals in the Phoenix area. The presence or ab-

(From the Hektoen Institute for Medical Research of the Cook County Hospital, Chicago, Illinois)
* Present address: Medical Center, Phoenix, Arizona.

sence of splenomegaly was verified by at least two observers and in most cases was confirmed at surgery or at autopsy. All cases in which the thrombocytopenia was secondary to marrow replacement were eliminated.

The following data, I believe, will corroborate the fact that the palpably enlarged spleen associated with thrombocytopenic purpura is almost invariably indicative of the secondary or symptomatic form—for in these 136 cases, the spleen was palpably enlarged in only 13 instances—and in 12 of these, pathologic sections of the spleen revealed such entities as Sarcoidosis, lymphosarcoma, Hodgkin's Disease, Gaucher's Disease, and so on.

One Instance

In only one instance in which the spleen was palpable, therefore, were the histologic sections compatible with primary thrombocytopenic purpura—and this in a 14 year old boy who, oddly enough, presented the smallest spleen in the series, that is, 210 grams. (Case 13-Chart I)

Splenectomy was performed in 11 of these 13 cases with significant post-operative elevation of the platelet count and cessation of bleeding occurring in every instance, and with permanent recovery in seven instances. Four cases expired post-operatively, one of pulmonary embolism, two having been poor surgical risks, and one ten weeks later as a result of Hodgkin's Disease. The two patients who were not subjected to splenectomy recovered spontaneously following bouts of infectious mononucleosis and infectious hepatitis. The average weight of the spleens in the secondary cases was 770 grams while in the primary cases, the average weight was 160 grams. Chart I presents an analysis of the cases in which the spleen was palpably enlarged.

SUMMARY:

1. One hundred and thirty-six cases of thrombocytopenic purpura were studied to determine the incidence of splenomegaly in this disease.
2. Thirteen palpable spleens were found; 12 of the 13 palpable spleens revealed primary or secondary pathologic changes. Only one instance of "primary" thrombocytopenic purpura was encountered in which the spleen was palpable.
3. Splenectomy is as effective therapeutically in secondary as it is in primary thrombocytopenic purpura.
4. Leukopenia is almost a constant finding in secondary thrombocytopenic purpura.
5. The presence of a palpably enlarged spleen in thrombocytopenic purpura practically rules out the primary type.

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1. Dameshek, W. & Miller, E. B.: The Megakaryocytes in Idiopathic Thrombocytopenic Purpura, A Form of Hypersplenism, Blood 1, 27, 1946; Dameshek, W.: Hypersplenism, Bull, N. Y. Acad. Med. 31: 115, 1955.

(Continued on page 373)

Chart 1.—Summary of Clinical and Hematologic Observations in 13 Cases of Thrombocytopenic Purpura in Which the Spleen Was Palpably Enlarged

				Thrombocytes				Spleen Size			
Case No.	Sex and Color	Age	Duration of Purpura	Preoperatively	Postoperatively	WBC	Segmented Cells %	Palpable	Weight in gm.	Diagnosis	Remarks
1	W/F	67	2 mon.	15,120	366,100	4,250	70	15 cm.	1,071	Gaucher' Disease	Splenectomy with recovery
2	W/F	20	3 days	32,000	264,000*	5,450	42	3 cm.		Infectious Mononucleosis	Spontaneous recovery, Splenomegaly subsided
3	W/F	20	None	70,000	250,000*	4,500	30	5 cm.		Infectious Mononucleosis with Infectious Hepatitis	Spontaneous recovery, Splenomegaly subsided
4	W/F	16	1 mon.	15,000	1,008,000	5,350	78	3 cm.	507	Sarcoidosis	Splenectomy with recovery
5	W/M	70	7 mon.	27,900	571,200	8,800	50	4 cm.	650	Lymphosarcoma	Sudden death 5 days postoperatively
6	W/F	64	None	14,000	"Normal"	2,300	58	To Iliac Crest	800	Congestive Splenomegaly	Splenectomy with recovery
7	W/F	48	1 day	32,100	788,200	4,000	67	8 cm.	1,500	Laennec's Cirrhosis	Expired 6 days postsplenectomy
8	W/F	51	6 mon.	0	361,000	5,850	90	5 cm.	580	Laennec's Cirrhosis	Splenectomy with recovery
9	W/F	67	6 yrs.	23,000	135,660	800	27	"Enlarged"	320	Laennec's Cirrhosis	Expired 12 hours postsplenectomy
10	W/F	23	16 yrs.	74,000	342,000	4,500	65	6 cm.	475	Congestive Splenomegaly	Splenectomy with recovery
11	W/F	25	None	76,000	496,800	3,250	69	7 cm.	578	Hemolytic Anemia	Splenectomy with recovery
12	W/M	31	3 mon.	0-48,000	137,900	1,100	72	6 cm.	1,235	Hodgkin's Disease	Expired 10 weeks postsplenectomy
13	W/M	14	1 mon.	61,000	198,000	8,100	43	3 cm.	210	"Splenic Hyperplasia"	Splenectomy with recovery

* Post-recovery Figures

Observations on Depression and Psychosomatic Medicine

By J. Edward Stern, M. D., El Paso

Depression

When a specific, or relatively specific, remedy becomes available for a disorder, the recognition of that disorder becomes a matter of urgency. The developments of the past twenty years place depression in this category. The syndrome of depression is very common and, as will be seen, has protean manifestations.

Definition

Depression is an emotional state which, in relatively mild, brief form is experienced by almost everyone; it is not disabling. Depression which is more intense and more persistent is more or less disabling. The word is used to designate a *symptom* which occurs in a variety of physical and emotional disorders and to identify a *disease* or group of diseases.

Characteristics of Depression

The recognition of depression is often difficult and always important. It is difficult because it is frequently masked. It is important because it involves suffering, often intense, and the risk of suicide. Current treatment is almost specific for its prompt relief although not for its cure.

The important characteristics of depression are: lowering or sadness of mood; slowing of the thought processes; reduction of motor activity. In other words, mood, thought, and motor activity go hand in hand in a downward direction. There are mixed forms of depression in which the three components do not run parallel. The most important of these is the group termed agitated depression in which motor overactivity is combined with depression of mood and of thought.

Etiology

The etiology of depression is usually obscure; occasionally it is obvious. Students of this problem have, as usual, invoked heredity, metabolic disturbances, endocrine disorders, and exogenous or external factors which may range from trivial to serious. Post-partum depression is not rare and, among infectious processes, post-influenzal depression has been known to the internist for many years.

The last type is interesting in that it is usually brief, lasting about one month, and may occur in children as young as twelve or thirteen. Agitated depression or involutional melancholia has, as already mentioned, special features and may, belying the title, occur in the twenties or thirties. The sexes are about equally affected.

Depressed patients have traits of personality which include: meticulousness, hypersensitivity, industriousness, and a narrow range of interests. The loss of near relatives and financial reverses appear to have a special impact on these persons.

Precipitating Causes

The precipitating causes of depression seem to run a gamut from slight insults to serious losses and to serious handicaps like that of homosexuality.

The psychoanalytic formulation of depression is involved. It includes the concepts of hypertrophied superego, oral incorporation, ambivalent feelings of love and hate, and excessive guilt. It proposes that the object which is loved is also, and unconsciously, hated; this hatred generates excessive guilt feelings. The theory infers that loss of the loved (and hated) object leads, in fantasy, to an oral incorporation of the object; this leads, in turn, to punishment by the superego portion of the personality of the incorporated object and of its incorporator, the patient.

Classification of Depression

Modern students of psychiatry have criticized psychiatric classification as spurious. Until valid etiologic understanding occurs, an understanding which is partially present in the case of organic mental syndromes, this criticism is valid. Often classification is purely descriptive of syndromes; sometimes it sinks to the mention of a symptom or two. In spite of this there is some value in reviewing a classical grouping of depression and then, in the light of current therapy, a perhaps more practical one.

Classical Grouping of Depression

Clinically, depressions may be classified according to the intensity as mild, moderate, or severe. The mild or simple type has one or more psychosomatic symptoms. The moderate or acute type has allopsychic concepts of unreality, autopsychic delusions of guilt, sin, and poverty, and psychosomatic symptoms. The severe or stuporous type is characterized by a preoccupation with thoughts of death.

In all of these groups important features include: sadness and depression as expressed in facies, posture, and trend of thought as expressed in speech; slowness and difficulty of thought; motor retardation of movement and speech. Other symptoms include: self-accusatory delusions of great sin or guilt; hypochondriacal or somatic delusions; neurasthenic symptoms; irritability; apprehension; insomnia; anorexia; and weight loss. A rather common complaint is that food has lost its savor. Insight is often fairly well preserved but reasoning alone is not a remedy.

Manic-Depressive Psychosis

The standard classification of depression is incomplete unless one takes into account manic-depressive psychosis and mania. The manic state may oc-

casionally, and erratically, cover the underlying condition of depression. It is characterized by an elated although unstable mood; by flight of ideas; and by motor overactivity. It is graded into hypomania; acute mania; Bell's delirious mania, usually fatal; and Schott's chronic mania.

Other combinations are those of recurrent depression; recurrent mania; alternating states of mania and depression; and mixed states. Of these, recurrent mania and alternating states are relatively rare.

Agitated Depression

The most important mixed state is that of agitated depression or involutional melancholia which has already been mentioned. This is a common disorder which may begin in the twenties or thirties. It may be said in passing that if, in the course of this disease, a young woman develops amenorrhea, it is as a result of the disease, not an indication of the menopause.

The disorder is characterized by depression of the mood without motor depression or, indeed, with motor overactivity; by feelings of apprehension or anxiety; by feelings of unreality; by unjustified feelings of self-accusation and self-depreciation; by delusions relating to the outside world, to the patient's personality, and to his body. Extremely important for the physician are the psychosomatic symptoms which may easily mask all the others. Some of these symptoms will be discussed later.

Another Category

Many students of the subject believe that use of the term agitated depression should be reserved for patients who have not had previous attacks of emotional disorder; if the condition recurs, it should then logically be placed in another category, for example, in that of manic-depressive depression.

The differential diagnosis includes: manic-depressive psychosis, anxiety neurosis with depressive symptoms, schizophrenic states with depressive symptoms, and organic disease of the brain.

One of the most interesting and confusing problems depends on the fact that depressive symptoms may be superimposed on organic disease of any kind, including organic brain disease. Even under these conditions, however, the depressive state can sometimes be treated with a measure of success.

A Proposed Classification

In the light of modern therapies another sort of classification may have more practical value. Only occasionally does a patient first present himself to the physician in an obvious state of depression perhaps vaguely masked by flurries of giggling, forced smiling, or excitement.

Usually the symptoms are much more subtle; they are phychosomatic; they may be multiple or, more confusing, single. Despite an old aphorism, a psychosomatic disorder may be monosymptomatic.

After obtaining the history, the medical examination, the neurological examination, and a reasonable, but not excessive, amount of laboratory work, the physician should see the patient again, alone or with a relative.

Crucial Session

This session is crucial to the diagnosis and pointed questions may be put in a matter-of-fact way:

> Have you suffered a great grief or loss?
> Do you feel sad or depressed?
> Do you cry at times?
> Do you feel that life is not worth living?
> Have you thought of harming yourself?
> How much weight have you lost?
> Why do you have so much difficulty with eating?

Finally, in addition to the physical disabilities which he has uncovered, the physician will try to classify the depression as: neurotic depression or anxiety reaction with depression and good insight; as psychotic depression with relatively little insight; as reactive depression in response to a severe misfortune; as agitated depression which is common; as manic-depressive depression which is less common; as depression in the course of an organic mental syndrome (with cerebral arteriosclerosis, syphilis, or tumor); as depression with schizophrenic, usually paranoid, coloring.

This type of classification is useful in mapping out the initial efforts at treatment and at prognosis. Unfortunately, one is sometimes called upon to weigh the importance of depression *as a symptom* and to determine which carries the greater risk to the patient, the symptom-complex from which he suffers or the treatment which is available.

Treatment

Current methods of treatment are relatively satisfactory in terms of affording symptomatic relief in a short period of time. The physician cannot be too conservative about the use of drastic therapy, electroshock therapy. The patient's physical status must be weighed carefully and the risks of treatment: temporary mental confusion, fracture, and vascular accidents should be explained to the patient or, preferably, to his family.

If it seems that the diagnosis is that of a neurotic depression with preservation of insight, then the patient should be treated by means of interviews and simple medications such as Dexedrine, chlorpromazine, barbiturates, and so on.

Electroshock

If such methods fail or if the case is unsuitable, a course of electroshock treatment may be undertaken. In many instances, the patient may be treated on an ambulatory basis. Exceptions to this are those circumstances in which there are no responsible relatives

at home, cases in which the home is at a great distance, and cases in which the patient is too disturbed.

The risk of suicide must be explained to the responsible relatives. If the patient is treated in the hospital obvious precautions will be taken as regards protection, rest, nutrition, diversion, and exercise mostly in the form of walking. The need for baths and hydrotherapy has practically disappeared, disturbed patients become tractable in three or four days, and most, if not all, can be treated in a general hospital which has a few seclusion rooms.

Suicide Hazard

As regards suicide, the hazard is greatest early in the disease and early in the phase of recovery.

Nowadays even bad risk cases, including those with cardiovascular and bone disorders, may be treated with the electric current by means of a special technique which involves the use of a fast-acting barbiturate, a brief-acting muscle relaxant and the administration of oxygen by the positive pressure apparatus.

Irrelevant to a general discussion are the characteristics of therapeutic electric currents and the routine use of small doses of relaxant in standard risk cases.

No Certain Methods

There are no certain methods by which to predict the outcome of electroshock therapy. The cases of uncomplicated depression have the best outlook; approximately 80 to 90 per cent of these patients will experience a remission of symptoms in two to four weeks.

Following this, psychotherapeutic interviews and, if necessary, an occasional, "maintenance dose" of the electric current will, in most cases, insure a durable remission. Every effort must be made to modify etiologic factors in the patient, his environment or both.

Work has been done along pharmacologic lines to identify the patients who will respond favorably to electroshock therapy. Funkenstein uses mecholyl and epinephrin, studying their effect on the pulse rate and arterial blood pressure of recumbent subjects.

Seven Groups

He classified them into seven groups. Groups arbitrarily called six and seven are believed to have a good prognosis; they show a marked rise of pulse rate and pressure in response to epinephrine, a marked fall in response to mecholyl with or without a chill. Another favorable sign is the production or relief of anxiety by means of mecholyl.

The mode of action of electroshock therapy is not known. It may be that it acts on the endocrine system by way of the pituitary gland. It may act to disorganize cortical engrams, memory circuits, to reverse the clinical picture.

Electroshock therapy should never be regarded as an end in itself, only as a means to the end of reorganizing the patient in his life situation.

Psychosomatic Symptoms

The psychosomatic symptoms observed in the course of depression may literally run the gamut from head to foot. I have observed, to mention only a few, tension headache; delusions of a foul odor in the nose suggesting atrophic rhinitis (fetid ozena); delusion of a hole in the palate following tonsillectomy; sensation of heaviness in the chest simulating, to the patient, heart trouble; emphysema and asthma much aggravated by depression; anorexia, constipation, loss of weight suggesting the presence of malignancy; heaviness, aching, and weak sensations in the legs suggesting rheumatism or at least psychogenic rheumatism; general weakness and fatigability. The physician should be wary of attributing too much of a patient's symtomatology to low blood pressure or secondary anemia.

Another Group

Another group of symptoms is sometimes of interest, especially perhaps in patients with much anxiety in addition to depression. The first symptom in this sequence is sighing. This leads to hyperventilation which is usually characterized not by fullblown tetany but by lightheadedness and stiffness and tingling of the extremities. Accompanying this there may be aerophagia with abdominal distention, belching, and flatulence.

Complicated Case

One interesting and complicated case was the first one treated here by means of the electric current and the special precautions already described. It was that of an enfeebled man of 72 years who suffered from depression, insomnia, anorexia, weight loss, coronary and cerebral arteriosclerosis, severe arterial hypertension, a vertebral compression fracture, the last due to a fall which probably occurred as the result of a small stroke.

After the treatment, there was considerable improvement in the emotional state, appetite, ability to sleep, and body weight. The patient did not require barbiturates. He was treated medically for over two years when he suffered a stroke of moderate intensity which left him with hemiparesis. He is still alive; his mood is fairly good and he retains an interest in his old business activities.

Practically all of the treatment was carried out in a general hospital and in his doctor's office. He did not have to be confined to a psychiatric hospital. When first seen he was not only depressed but agitated and querulous; in fact, he appeared to be "wearing himself out."

Perhaps the treatment prolonged his life; perhaps it only helped to make him a bit more comfortable. In any case it seems to have been worthwhile.

Insulin Additives: Glucagon, Nitrogenous Substances, Metallic Elements, and Specific Pharmacodynamic Agents

By Theodore M. Feinblatt, M. D.,
and Edgar A. Ferguson, Jr., Chemist, Brooklyn, N. Y.

PART II

GLUCAGON (as an insulin additive)

By 1936[1] it became evident that there were vast clinical differences in at least two types of diabetes. This was related to the degree of insulin sensitivity[2]. One of the present authors was engaged in research directed toward a laboratory method of delineating the types of diabetes called "juvenile" and the type designated as "obese". Hinsworth of London[3] described a six-minute insulin sensitivity test which consisted of giving a 3 unit intravenous dose of insulin to the fasting subject and thereafter determining the blood sugar at 2, 4, and 6 minute intervals. The insulin-insensitive type (obese) diabetic usually had a flat blood sugar curve, or even a rising curve similar to a normal subject.

The insulin-sensitive type (juvenile) diabetic showed immediate drop in blood sugar. Unfortunately this work was not confirmed in this country (The United States) until 1954 when it was discovered that, due to a difference in the commercial method of extraction, the European insulin did not contain glucagon, a substance which is present in American commercial insulin products and which causes immediate elevation of the blood sugar after intravenous injection. The use of glucagon-free insulin extracts in the United States confirmed the results[3] which the pioneers in England had discovered in 1935.

Happy Event

This was an extremely happy event because almost 20 years ago our clinical observations[1, 2] dividing diabetics into "juvenile" and "obese" types were not confirmed by laboratory findings. While the clinical history and the general response of the diabetic to insulin treatment and diet constantly pointed out the two types it had been disappointing that for 20 years no laboratory or truly objective test could be found which confirmed these earlier observations.

The explanation offered, now that agreement as to results has been achieved, is that the "juvenile" diabetic has no intrinsic insulin response nor homeostatic mechanism. The dependence on extrinsic injected insulin being complete, the "juvenile" type therefore suffers from an "absolute" deficiency of insulin. Hence his straight-forward response to glucagon-free insulin, — that is, a blood sugar drop immediately following intravenous injection. On the other hand, the "obese" diabetic has some normal insulin production and an intact homeostatic mechanism similar to a normal individual.

Productive Capacity

This productive capacity may be overcome and overloaded by the recently isolated (from liver) anti-insulin factor (insulinase).[33] Thus, when glucagon-free insulin is intravenously injected in an "obese" diabetic, the normal response of a healthy individual predominates, — which is to overcome the excess insulin by producing a hyperglycemic response (homeostasis). This produces an unchanging blood sugar curve, or a rising blood sugar curve when the hyperglycemic response is excessive. This is the normal homeostatic phenomena.

Whether the "juvenile" diabetic started out in the same manner as the "obese" diabetic and later became "exhausted" either because high doses of

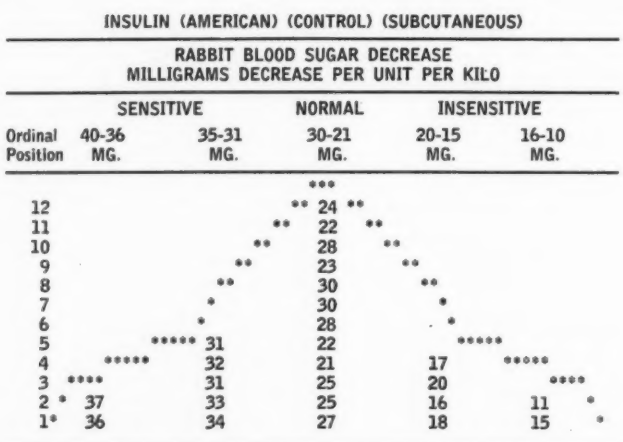

Figure 2

insulin "rested" the normal insulin-producing mechanism or whether constant hyperglycemia "wore out" the insulin resisting mechanism is speculative. However, these explanations are suggested by the differing responses of controlled diabetics in either classification when compared to uncontrolled diabetics.[4]

Mechanism

This mechanism was originally suggested by the response of diabetics to high carbohydrate diet showing improved insulin sensitivity by one of the authors in 1937[12] following the suggestions of others who had worked before the time of high insulin dosage.[13,14,15]

Therefore the so-called "improvement" in a controlled diabetic may be merely a glucose storage phenomena associated with improvement in the liver function of the controlled diabetic. Conversely the so-called "good result" of an "obese" diabetic becoming more insulin sensitive with dietary control may again be merely a glucose liver-depletion phenomena.[34]

This differentiation of mechanism does not change the observation that insulin sensitivity, whether measured by American-produced insulin or the European glucagon-free insulin, follows a normal distribution curve in reference to the number of individuals which are relatively sensitive and the number relatively insensitive in any group.

Thus it has been shown that in both human subjects[5] and in normal rabbits[6] approximately 25 per cent are extremely sensitive, 25 per cent were extremely insensitive, and the remainder clustered about the average. This is the typical bell-shaped normal distribution curve for any variable animal trait measured statistically. See Figure 2.

Average Insulin (American) (Subcutaneous) Effect

This is the normal distribution found in a control group of subcutaneously injected rabbits. About 50 per cent have a normal response of about 25 milligrams blood sugar decrease per rabbit unit per kilo, 25 per cent are sensitive, and 25 per cent are insensitive. (Average of 25 experiments)

Note: Adapted in part from, "Variability of Insulin Response in Standard Rabbits," by Feinblatt and Ferguson, reference 6.

A measure of the glucagon content of commercial insulin available in the United States can be made by noting the difference in time of response and degree of response when the subcutaneous route in rabbits is compared with intravenous administration of insulin. It is necessary to give 10 times the dose of glucagon-containing insulin by intravenous route to get the same response within a period of one-half hour as by subcutaneous injection and it is necessary to give three times the dose to achieve shock levels within one hour by the intravenous route as compared with subcutaneous route.

It is obvious that the glucagon content, which may be regarded as an insulin additive, causes a greater decrease of insulin response by intravenous administration than by subcutaneous administration. This is possibly because its effect is fleeting.[3]

This confirms the observation that very often, in

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INSULIN (AMERICAN) SUBCUTANEOUS COMPARED WITH INTRAVENOUS ADMINISTRATION

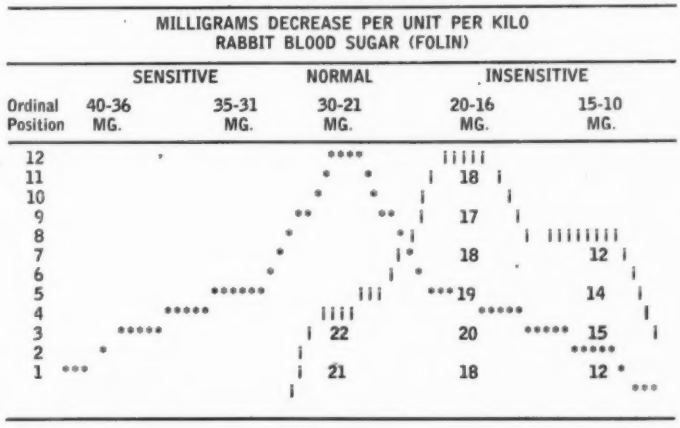

Figure 3

******* Normal rabbit response to American insulin (subcutaneous)
||||||| Normal rabbit response to the same dose of American insulin injected intravenously.

The apparent shift to a more insensitive response is due to the high glucagon content of the insulin used which is only apparent readily when the intravenous route of administration is used. (Average of 12 experiments)

Clinical Note On Postpartum Endocervicitis

By Joseph B. Raddin, M. D., Phoenix

The greatest single cause of pelvic distress in women, especially in those who have been pregnant one or more times, is endocervicitis. An abortion or miscarriage regularly causes as much cervical canal gland infection as a full term pregnancy and delivery. Young girls are also occasionally victims of endocervicitis but much less frequently.

Postpartum vaginal soreness and discharge commonly expected and called lochia is partly endometrial slough and partly drainage from the endocervicitis.

Rarely does complete cure of postpartum endocervicitis occur spontaneously without treatment to the cervix.

Pelvic Discomfort

Ninety per cent of women who have been mothers have various amounts of chronic cervical canal gland infection causing pelvic discomfort which may persist a lifetime if therapy is not instituted. The cervical erosion so frequently associated with endocervicitis when untreated for many years is generally conceded to predispose to carcinoma of the cervix.

As long as cervical canal gland infection persists there will be pelvic parametritis which causes distress with coitus and prevents a woman enjoying orgasm. Rejection of coitus is unavoidable. Marital unhappiness, frigidity and divorce commonly results.

Cause of Backache

Chronic endocervicitis is also the most common cause of backache in women. Because of the extension of the cervical inflammation, induration and edema to the round, broad and utero-sacral ligaments, pelvic, hip and low abdominal aches and pains are complaints. Most sacral bachache in women is due to involvement of the utero-sacral ligaments and not to sacro-iliac joint arthritis or vertebral pathology. Pelvic parametritis is an accurate description and diagnosis. Suspension of the uterus is obviously not curative because the endocervicitis is not treated. A "painful ovary" is often diagnosed rather than endocervicitis and parametritis and one or both ovaries may be needlessly removed.

Cautery Ineffective

Cautery of the cervical erosion is ineffective unless the endocervicitis is treated. The cervical canal need not be cauterized because of infection. Nor is hysterectomy, total or supravaginal, indicated. All too frequently supravaginal hysterectomy has been performed without any improvement in pelvic distress because the cervix is retained and the cervicitis is the real cause of the pain. In fact, the addition of the hormone imbalance subsequent to pelvic surgery regularly aggravates nervousness.

A sound suggestion to physicians doing obstetrics, proved by many years experience, is to include postpartum therapy to the cervix in addition to prenatal care and delivery. An additional charge can be made or included in an overall fee.

Postpartum Therapy

Routine postpartum therapy to the cervix can begin six to eight weeks following delivery. Using small gauze wipes, the cervical canal is wiped clean of discharge. Negetan (Lilly) is then applied freely, by means of a cotton tipped applicator, to the cervical canal and erosion, if present. Care should be taken to protect the vaginal mucous membrane with a piece of gauze to absorb any excess Negetan. A medicated vaginal tampon is then inserted and allowed to remain 24 hours. On removal an acetic acid (distilled vinegar) douche is prescribed. Three treatments weekly in the intervals between menstruation are given. Six to twelve tampon treatments are usually sufficient to restore the cervix to normal size and function, free of infection, edema and pelvic pain.

Summary

Postpartum therapy of endocervicitis should be part of routine obstetrical care. Virtually all postpartum vaginal and pelvic distress will be prevented and cured by the Negetan and medicated tampon treatments suggested.

Dr. Schlesinger to Speak in El Paso

Dr. R. Walter Schlesinger, Professor of Microbiology and Director of the Department at the Saint Louis University School of Medicine in Saint Louis, Missouri, will be the speaker at the regular meeting of the El Paso County Medical Society at its Turner Home, 1301 Montana Street, at 7:30 p.m. June 12.

A Fellow in the New York Academy of Medicine, Dr. Schlesinger received his M.D. from the University of Basel, Switzerland, Medical School, interned at Beekman Hospital in New York and the Stamford Hospital in Stamford, Conn., and from 1940 to 1946 was a Fellow, then Assistant in Pathology and Bacteriology, at the Rockefeller Institute for Medical Research in New York. He has served as Consultant to the Secretary of War on a mission to the Far East area for the Army Epidemiological Board, Associate Research Professor of Pathology and head of the Virus Research Laboratory at the University of Pittsburgh School of Medicine, and associate member of the Division of Infectious Diseases at the Public Health Research Institute of the City of New York.

Monthly Clinical . . . . .

(Continued from page 364)

to be expected, the main pathological findings were in the chest. After removing the sternum, a large hemorrhagic mass was visualized in the right pleural cavity, which was covered by the parietal pleura.

This mass measured 15 by 15 by 10 cm. and had pushed the right lung medially and forward, and had pushed the heart and left lung completely over to the left. Upon removing the organs of the chest, it was easily seen that the mass was connected with the descending aorta. The descending aorta had been transformed into a fusiform, saccular structure which extended from the level of the second intercostal artery to the diaphragm.

Numerous Ulcers

The intima showed numerous atheromatous ulcers and was covered with partially organized thrombotic material. Approximately at the level of the fourth intercostal artery posteriorly and to the right, a tear existed in the wall of the aorta which went through the intima and media.

This tear lead into a large hematoma contained by the thinned-out adventitia. This corresponded to the hematoma first noted when the right pleural cavity was opened.

In addition, the hematoma had dissected along the wall of the aorta, extending through the diaphragm to the level of the renal arteries.

Summary

In summary, then, we have a patient with an arteriosclerotic aneurysm of some duration which finally produced a dissection, followed by shock, mostly due to the rapid and considerable loss of blood. The dissection also explains the pain which was associated with this illness.

Insulin Additatives: . . . . .

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cases of diabetic coma, high doses of insulin by intravenous route are followed by an immediate rise in blood sugar. This effect is not noted when the same amount of insulin is given by subcutaneous route.

A graph of subcutaneous compared with intravenous administration in rabbits is shown in Figure 3.

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Dr. Hinchey of . . . . .

(Continued from page 352)

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He is Associate Professor in Orthopaedic Surgery at the University of Texas Graduate School of Medicine in San Antonio, Assistant Professor in Orthopaedic Surgery at the Baylor Graduate School of Medicine, and is a Consultant at Brooke General Hospital in San Antonio.

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Dermatologists to Discuss Cosmetics at A. M. A. Meeting

The Committee on Cosmetics of the American Medical Association will sponsor a symposium at the 105th annual meeting of the American Medical Association in Chicago June 11-15, 1956. The symposium will be held at 3 p. m. Wednesday June 13 in the ballroom of the Knickerbocker Hotel.

This is the first time in the history of the Association that a program has been specifically planned to inform the physician on the significance of cosmetics in medical practice. This symposium was prompted by the Committee's recognition of the increasing psychologic, physiologic and economic importance of a healthy attractive skin and the close relationship between these aspects and the use of cosmetics.

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